UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,174	09/18/2003	Mallikarjun Chadalapaka	200312982-1	8720

22879   7590   12/09/2009
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
3404 E. Harmony Road
Mail Stop 35
FORT COLLINS, CO 80528

EXAMINER
DAILEY, THOMAS J

ART UNIT	PAPER NUMBER
2452	

NOTIFICATION DATE	DELIVERY MODE
12/09/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
ipa.mail@hp.com
laura.m.clark@hp.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _25 January 2009_.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-25_ is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) _1-25_ is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

1. Claims 23-25 were added by the amendment filed on 8/14/2009.

2. Claims 1-25 are pending.

Response to Arguments

3. The 35 USC 101 rejection of claim 22 has been withdrawn in view of the applicant's entered amendments.

4. Applicant's arguments with respect to the independent claims have been considered but are moot in view of the new ground(s) of rejection.

5. The applicant argues with respect to claim 1, that Satran (Internet Draft entitled "iSCSI," Sept. 5, 2002) fails to disclose determining whether the request for the data transfer contains a request for acknowledgment of completion of the data transfer and if the request for data transfer does contain a request for acknowledgement of the completion of the data transfer, setting a variable in memory to wait for an event to correspond to the completion of the request for data transfer and sending an acknowledgement to the first protocol upon the occurrence of the event. Specifically, the applicant contends that while Satran may disclose a target of a data transfer operation setting an acknowledgment in a data payload PDU, that is different from a first protocol layer initiating a request

fro a data transfer, where such a request for data transfer contains a

request for acknowledgment of completion of the data transfer as recited.

6. The examiner disagrees and notes in response to the arguments against

the references individually, one cannot show nonobviousness by attacking

references individually where the rejections are based on combinations of

references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981);

In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Specifically, while Wendt reference does not explicitly disclose

determining with the request for the data transfer contains a request for

acknowledgment of completion of the data transfer and therefore, if the

request for data transfer does contain a request for acknowledgement of

the completion of the data transfer, setting a variable in memory to wait for

an event to correspond to the completion of the request for data transfer

and sending an acknowledgement to the first protocol upon the

occurrence of the event. The Satran reference cures this deficiencies by

disclosing an acknowledgment bit (i.e. an A bit) at the first protocol layer of

the Wendt reference (the iSCSI layer), in the same manner that is taught

by the instant application (compare, applicant's specification page 15,

[0033] (where iSCSI is also the application/first layer protocol) with the

Satran disclosure of page 156, section 9.7.2, "A (Acknowledge) bit", first

paragraph, "For sessions with...").

That is, since the combination of Satran with Wendt would yield an explicit request for acknowledgment with any data request via an A-bit at the first layer, it is essential that at the lower layers (i.e. "the second layer" or iSER layer as disclosed in Wendt (slide 3)) determine the contents of the superior layers, which would include reading of the A-bit.

7. The applicant further argues with respect to the combination of Wendt and Satran that there existed no reason to combine the two teachings to achieve the claimed subject matter. Specially, the applicant contends neither Wendt nor Satran disclose reasons to combine the teachings.

8. The examiner disagrees and notes, *KSR International Co. v. Teleflex Inc.* forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. See the Board decision Ex Parte Smith, --, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007) (citing KSR, 82 USPQ2d at 1396).

Further still, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, the examiner has relied upon the knowledge generally
available to one of ordinary skill in the art, and the teachings would have
been combined so as to produce a system to increase reliability in the
Wendt's system via the A bits disclosed in Satran. That is, one of ordinary
skill would have recognized increasing the reliability of the system would
have a positive impact on the system overall.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for
all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described
as set forth in section 102 of this title, if the differences between the subject matter sought to
be patented and the prior art are such that the subject matter as a whole would have been
obvious at the time the invention was made to a person having ordinary skill in the art to which
said subject matter pertains. Patentability shall not be negatived by the manner in which the
invention was made.

10. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable
over J. Wendt et al. (Data Integrity PowerPoint presentation entitled
"ISCSI-R Data Integrity," slides 1-36, Version 1d, Oct. 4, 2002), hereafter
"Wendt," in view of Satran, Julian et al. (Internet Draft entitled "iSCSI,"
Sept. 5, 2002), hereafter "Satran."

11. As to claim 1, Wendt discloses an apparatus for acknowledging a data
transfer, comprising:

a processor configured to transfer data according to a plurality of

protocols of a protocol stack (Slide 3, Figure labeled "iSCSI-R" "Initiator")

comprising:

a first protocol layer to initiate a request for a data transfer (Slide 3,

labeled "iSCSI-R" "Initiator" with "iSCSI" reading on the first protocol

layer;);

and a second protocol layer (Slide 3, Figure labeled "iSCSI-R"

"Initiator" "iSER" reading on "a second protocol layer") to:

receive the request for the data transfer from the first protocol layer

(Slide 3, Figure labeled "iSCSI-R" "Initiator"'; iSCSI commands are

encapsulated (i.e. "received" from one protocol layer to another) to include

iSER related data, as in Slide 13); and

send a performance request corresponding to the request for data

transfer to a third protocol layer (Slide 3, Figure labeled "iSCSI-R"

"Initiator"' "RDMA" reads on "third protocol layer"; Slide 4, section 3,

CRC's (i.e. performance requests) are carried in the RDMA layer of the

messages, see also Slide 12).

But, Wendt does not disclose determining with the request for the data

transfer contains a request for acknowledgment of completion of the data

transfer and if the request for data transfer does contain a request for

acknowledgement of the completion of the data transfer, setting a variable

in memory to wait for an event to correspond to the completion of the

request for data transfer and sending an acknowledgement to the first

protocol upon the occurrence of the event.

However, Satran discloses the use of iSCSI over other protocol layers

(page 23-24, section 2.2.1 Layers and Sessions) including requests for

data transfers using the iSCSI protocol which contain a request for

acknowledgment of completion of the data transfer (page 156, section

9.7.2, "A (Acknowledge) bit", first paragraph, "For sessions with…") and if

the request for data transfer does contain a request for acknowledgement

of the completion of the data transfer, setting a variable in memory to wait

for an event to correspond to the completion of the request for data

transfer and sending an acknowledgement to the first protocol upon the

occurrence of the event (page 156, section 9.7.2, "A (Acknowledge) bit",

first paragraph, "For sessions with…"; "A bit" reads on variable set in

memory).

That is, since the combination of Satran with Wendt would yield an

explicit request for acknowledgment with any data request via an A-bit at

the first layer, it is essential that at the lower layers (i.e. "the second layer"

or iSER layer as disclosed in Wendt (slide 3)) determine the contents of

the superior layers, which would include reading of the A-bit.

Therefore it would have been obvious at the time of the applicant's

invention to combine the teachings of Wendt and Satran in order to

increase reliability in the Wendt's system through the use of acknowledgments and A bits as disclosed in Satran.

12. As to claims 8, 16, and 22-23, they are rejected by a similar rationale set forth in claim 1's rejection.

13. As to claims 2 and 17, Wendt discloses the first protocol is an internet small computer systems interface ("iSCSI") protocol (Slide 3, Figure labeled "iSCSI-R" "Initiator" "iSCSI").

14. As to claims 3 and 13, Wendt discloses the second protocol is an internet small computer systems interface extensions for remote direct memory access ("iSER") protocol (Slide 3, Figure labeled "iSCSI-R" "Initiator" "iSER").

15. As to claims 4 and 14, Satran discloses the request for the data transfer comprises an attribute that indicates the request for acknowledgement of completion of the data transfer (page 156, section 9.7.2, "A (Acknowledge) bit", first paragraph, "For sessions with…"; "A bit" reads on variable set in memory).

16. As to claim 5, Satran discloses a value of an error recovery level is notified

to the second protocol from the first protocol (page 222, Section "11.20

ErrorRecoveryLevel).

17. As to claims 6 and 18, Wendt discloses the third protocol is a remote

direct memory access ("RDMA") protocol (Slide 3, Figure labeled "iSCSI-

R" "Initiator" "RDMA").

18. As to claims 7 and 19, Wendt discloses the event relates to a zero length

remote direct memory access ("RDMA") read completion (Slide 26).

19. As to claim 9, Wendt discloses receiving the performance request that

corresponds to the data exchange request (Slide 3, Figure labeled "iSCSI-

R" "Initiator"' "RDMA" reads on "third protocol layer"; Slide 4, section 3,

CRC's (i.e. performance requests) are carried in the RDMA layer of the

messages, see also Slide 12).

20. As to claim 10, Wendt discloses a remote direct memory access network

interface card ("RNIC") that is used by the protocol stack to exchange the

message between the at least one of the plurality of systems and the at

least one input/output device via the network (Slide 34, RNIC labels).

21. As to claims 11 and 20, Wendt discloses the message is a remote direct memory access ("RDMA") write message (Slide 21).

22. As to claim 12, Wendt discloses the message is a zero length remote direct memory access ("RDMA") read message (Slide 26).

23. As to claim 15, Wendt discloses the process operates according to a small computer systems interface protocol ("SCSI") (Slide 1).

24. As to claim 21, Satran discloses establishing an error recovery level by the first protocol to indicate the error recovery level in the request for acknowledgement of completion of the data transfer (page 222, Section "11.20 ErrorRecoveryLevel).

25. As to claims 24 and 25, Wendt discloses the processor and first, second, and third protocol layers are part of an initiator node to perform the data transfer with a target node (Slide 3, "Initiator label").

Conclusion

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

27. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first

reply is filed within TWO MONTHS of the mailing date of this final action

and the advisory action is not mailed until after the end of the THREE-

MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee

pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the

advisory action. In no event, however, will the statutory period for reply

expire later than SIX MONTHS from the mailing date of this final action.

28. Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Thomas J. Dailey whose telephone

number is 571-270-1246. The examiner can normally be reached on

Monday thru Friday; 9:00am - 5:00pm.

29. If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Thu Nguyen can be reached on 571-272-6967.

The fax phone number for the organization where this application or

proceeding is assigned is 571-273-8300.

30. Information regarding the status of an application may be obtained from
the Patent Application Information Retrieval (PAIR) system. Status
information for published applications may be obtained from either Private
PAIR or Public PAIR. Status information for unpublished applications is
available through Private PAIR only. For more information about the PAIR
system, see http://pair-direct.uspto.gov. Should you have questions on
access to the Private PAIR system, contact the Electronic Business
Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from
a USPTO Customer Service Representative or access to the automated
information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-
1000.

/T. J. D./
Examiner, Art Unit 2452

/THU NGUYEN/
Supervisory Patent Examiner, Art Unit 2452